

# *OPTICAL FIBER TRANSMISSION SYSTEM WITH INCREASED EFFECTIVE MODAL BANDWIDTH TRANSMISSION*

## **Abstract**

A multi-mode optical fiber link is described. The multi-mode optical fiber link includes a first spatial mode converter that is coupled to a first single mode optical fiber. The first spatial mode converter conditions a modal profile of an optical signal propagating from the single mode optical fiber to the first spatial mode converter. A multi-mode optical fiber is coupled to the first spatial mode converter. A second spatial mode converter is coupled to an output of the multi-mode optical fiber and to a second single mode optical fiber. The second spatial mode converter reduces a number of optical modes in the optical signal. Both the first and the second spatial mode converters increase an effective modal bandwidth of the optical signal.